

Amendments to the Claims:

Claims 1, 9 and 11 to 14 are amended, claim 8 is cancelled and claim 15 is added as set forth hereinafter.

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A probe head for a coordinate measuring apparatus, the probe head comprising:

a yielding part which deflects during operation of said probe head;

5 a plurality of measuring systems for measuring [[a]] the deflection of said yielding part in respective directions;

a damping device for damping said yielding part in a pregiven direction; ~~and,~~

said damping device including at least one friction brake
10 for generating a friction force between two surfaces to effect said damping of said yielding part in said pregiven direction with said friction force being electrically ~~changeable~~ changeable; and,

an electronic controller connected to said damping device
15 for adjusting said friction force.

2. (Original) The probe head of claim 1, said friction brake including a flag and an electromagnet for electromagnetically drawing said flag to said electromagnet.

3. (Original) The probe head of claim 2, wherein said flag is a first flag and said damping device includes a second flag; and, said first and second flags coact electromagnetically with said electromagnet.

4. (Original) The probe head of claim 3, wherein at least one of said first and second flags is reinforced in the region of said electromagnet.

5. (Previously Presented) The probe head of claim 2, said damping device further comprising clamping means for clamping said flag.

6. (Original) The probe head of claim 5, wherein said flag has a side facing away from said electromagnet; and, said clamping means comprises a plate disposed on said side of said flag in spaced relationship thereto; a holder; and, said plate is
5 resiliently mounted on said holder so as to permit a displacement relative thereto when said plate is drawn by said electromagnet to clamp said flag therebetween.

7. (Original) The probe head of claim 6, wherein said plate has a thickness greater than the thickness of said flag.

8. (Cancelled).

9. (Currently Amended) The probe head of ~~claim 8~~ claim 1, said

electronic controller including means for adjusting said friction force in proportion to the time-dependent derivative of the measured deflection in a particular direction (x, y, z).

10. (Original) The probe head of claim 9, said electronic controller including means for clamping said probe head for a short time to counter a rebound of the probe head during a contacting operation.

11. (Currently Amended) The probe head of ~~claim 8~~ claim 1, said friction brake including a flag and an electromagnet coacting with said flag; and, said electronic controller including means for applying an alternating current to said electromagnet for generating a low damping.

12. (Currently Amended) The probe head of ~~claim 8~~ claim 1, said friction brake including a flag; an electromagnet coacting with said flag; and, a spring-suspended plate in spaced relationship to said flag; said electronic controller including means for clamping said friction brake by first applying a voltage (U_{sp}) above a threshold voltage (U_{plate}) so that said spring-suspended plate is pulled toward said electromagnet and then dropping said voltage (U_{sp}) to below said threshold voltage (U_{plate}) after said spring-suspended plate has been pulled toward said electromagnet.

13. (Currently Amended) The probe head of ~~claim 8~~ claim 1, further comprising a measuring force generator drivable by said electronic controller; and, for clamping said yielding part in a

pregiven desired position of a corresponding one of said
5 measuring systems, said electronic controller functioning to
clamp said friction brake in a desired position of said yielding
part; and, causing said measuring force generator to generate
pulse-like measurement forces opposite to the direction of the
deflection relative to said desired position until said
10 corresponding one of said measuring systems is in its zero
position.

14. (Currently Amended) The probe head of ~~claim 8~~ claim 1,
wherein said electronic controller increases the friction force
of said friction brake or clamps said friction brake during
acceleration operations of said probe head.

15. (New) A probe head for a coordinate measuring apparatus,
the probe head comprising:

a yielding part which deflects during operation of said
probe head;

5 a plurality of measuring systems for measuring the
deflection of said yielding part in respective directions;

a damping device for damping said yielding part in a
pregiven direction;

said damping device including a friction brake for
10 generating a friction force to effect said damping with said
friction force in said pregiven direction;

said friction brake including a flag connected to said
yielding part and an electromagnet for electromagnetically
drawing said flag into contact engagement with said electromagnet

15 to generate said friction force therebetween to dampen said yielding part; and,

an electronic controller connected to said electromagnet for adjusting said friction force.